

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

December 23, 2003

TO: Internal File

THROUGH: Karl R. Houskeeper, Environmental Scientist III/Inspector, Team Lead

FROM: Steve Fluke, Reclamation Hydrogeologist

RE: 2003 Midterm Review, Utah American Energy, Inc., Horse Canyon Mine, C/007/013, Task ID #1750

SUMMARY:

The Division is required to review each active permit during its term, in accordance with R645-303-211. A Midterm Review takes place at the midpoint of the permit term (November 6, 2003 for the Horse Canyon Mine) and covers pertinent elements. The Division is currently conducting the Midterm Review for the Horse Canyon Mine. The pertinent element chosen for review that focuses on hydrology is the following:

A review of the applicable portions of the permit to ensure that the plan contains commitments for application of the best technology currently available (BTCA) to prevent additional contributions of suspended solids to stream flows outside of the permit area.

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TECHNICAL ANALYSIS:

OPERATION PLAN

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

Sediment Control Measures

Sediment control measures are in place during reclamation to prevent additional contributions of sediment to stream flow or runoff outside the permit area. Because mining activities have ceased, sediment controls are limited to those associated with drainage as outlined on Drawing Number VI-3, Drainage Details. These controls include diverting runoff using protected channels and culverts through disturbed areas, the use of riprap to reduce overland flow velocities, and silt fences to trap sediment.

Siltation Structures: General

Runoff at the site is conveyed to silt fences as shown in Table 6.6.1-1A and on Drawing Number VI-3, Drainage Details. The permittee has committed to the inspection and maintenance of the silt fences to ensure that all runoff is passed through them. During the midterm site inspection, it was noted that several silt fences were in need of maintenance and repair. These include silt fences located in watershed area 2 at the former Sediment Pond No. 1; watershed area 30 east of the former culvert at the refuse pile; watershed area 33; and watershed area 34.

Discharge Structures

Discharge structures in place during reclamation include berms and ditches. Design information for the discharge structures are in Table 6.5.1-2 and again for the ditches on Drawing Number VI-3. During the midterm site inspection, it was observed that two ditches were in need of repair: 1) ditch number 3A used to discharge to the former Sediment Pond No. 1 had extensive erosional rilling for approximately 50 feet beyond the extent of the ditch riprap;

and 2) the unlabeled ditch within the refuse pile that discharges to Horse Canyon Creek has completely failed where the channel had been realigned following removal of a culvert.

Findings:

Diversion and sediment control information is not sufficient to meet the requirements of the Coal Mining Rules. Before the Midterm Review can be approved, the Permittee needs to provide the following information:

R645-301-732.100, the Permittee needs to maintain and repair existing silt fences at the site.

R645-301-744.100, the Permittee needs to update Table 6.5.1-2 and the table on Drawing VI-3 to include riprap dimensions for ditch 3A.

R645-301-744.100, the Permittee needs to update Drawing III-1A-1 to include a ditch number for the unlabeled ditch that discharges from the refuse pile to Horse Canyon Creek.

R645-301-744.100, the Permittee needs to update Table 6.5.1-2 and the table on Drawing VI-3 to include the unlabeled ditch that discharges from the refuse pile to Horse Canyon Creek.

R645-301-744.100, the Permittee needs to repair the final 50 feet of both ditch 3A and the unlabeled refuse pile ditch according to the designs incorporated into Table 6.5.1-2 and the table on Drawing VI-3.

RECOMMENDATIONS:

The Midterm Review should not be approved at this time. Additional diversion and sediment control information is needed to meet the requirements of the Coal Mining Rules.